

APPENDIX

Notes for FOMC Meeting
July 2-3, 1990
Sam Y. Cross

The dollar has traded quite narrowly since your last meeting. Until last week, the dollar showed a slightly firm bias, as market participants felt that U.S. monetary policy would remain steady despite continued signs of weakness in the economy. However, over the past ten days, the dollar has softened a bit as evidence that the Administration might ease its opposition to a tax increase has been viewed as increasing the prospects of a near-term decline in dollar interest rates. But these dollar rate movements have all been very small, and the dollar has been quite stable, with current rates only marginally different from those in mid-May.

In late-May, the dollar, after briefly dipping below the 150 level, received support from various developments. First, in light of comments by Federal Reserve officials about the importance of controlling price pressures, market participants concluded that while the U.S. economy was weak in certain areas, it was not weak enough to cause the Fed to ease its policy stance. Second, uncertainties about the outcome of the U.S.- Japan SII negotiations and periodic rumors of a new stock scandal in Japan involving an aide to the Prime Minister increased the market's nervousness about the yen, and the Japanese currency declined modestly against virtually all other major currencies. Third, concerns over economic and political stability in the Soviet Union and uncertainty over how West Germany would finance the costs of unification with East Germany caused the mark to move slightly lower against the dollar and to decline to a greater extent against the mark's European counterpart currencies.

With this downward pressure on the mark within the ERM, the other European central banks intervened, at times heavily, to keep the DM from falling to the bottom of the band, and also reduced their interest rates to reduce the relative attractiveness of their currencies vis-a-vis the mark.

In the past ten days or so there has been another modest mood shift, and the dollar has eased a bit, especially against the yen. One factor was the successful conclusion of the SII talks, which lessened fears of continuing U.S. pressure on the Japanese. Another factor was interest rates: the Bank of Japan has been signalling that monetary policy would be neutral to tighter and the expectation has been that monetary policy in Germany would be neutral to tighter, while in the United States the budget talks revived expectations of near-term declines in interest rates. But there has been little movement in dollar exchange rates, and investors seem to have had little desire to shift portfolios from one currency to another. Throughout the six-week period, there was no attempt to influence the dollar exchange rate through dollar intervention, either by ourselves, the Bank of Japan, or the Bundesbank.

However, the Treasury decided that this period of relative dollar stability and market calm provided a good opportunity to re-channel some of the ESF mark reserves back into the market. After considerable review internally within the Treasury, and after our discussing the proposal with the Bundesbank, the Desk began on May 29 buying dollars against marks quietly and in modest amounts for the

ESF's account. The plan is to sell up to \$2 billion of DM by the end of July, and to use the dollar proceeds to reduce the amounts the Treasury holds under the warehousing agreements with the Federal Reserve. The unwinding of some of the warehousing addresses a Federal Reserve concern inasmuch as it would provide more headroom for currency backing. The foreign exchange transactions have been carried out in a manner intended to minimize any effect on dollar exchange rates and to avoid any mistaken signal of policy significance. We have operated in modest and irregular amounts, at various times during the day, through a wide range of banks, at times when the dollar was not under upward pressure and when there was substantial liquidity because of good two-way business or cross-trading going through the market. Since May 29, we have sold DM equal to a total of \$572.6 million in the market, thus far without incident.

I mentioned that we have discussed these operations with the Bundesbank. Initially, they were concerned about market sales by the United States, particularly at a time when, as noted above, there had been some pressures on the DM within the EMS. The Germans favored doing some or all of the transactions directly and off-market with the Bundesbank. The Treasury is considering a direct transaction, for up to \$1 billion of the proposed \$2 billion total, but both we and the Treasury wish to preserve the idea of doing some of this business in the market as long as market conditions permit.

Mr. Chairman, during the period two warehousing agreements were renewed, for one year each--one on June 1 for \$1 billion and the other on June 15 for \$2 billion. If the Treasury's program to sell up

to \$2 billion of DM by end-July proceeds as we expect, the Treasury would plan to unwind part of the \$9 billion of currency warehoused with the Federal Reserve in the period ahead. The current thinking is that the next warehousing agreement to mature, one for \$1 billion coming up on July 20, might be repaid with dollars acquired in the market, perhaps topped up with cash balances. An additional amount of up to \$1 billion that might come from the dollars bought directly from the Bundesbank could be used to repay a warehousing agreement coming due later in the year--perhaps the one maturing on September 11.

With respect to other operations, I would like to note that on May 23 and June 1, Mexico made principal repayments to the U.S. authorities totalling \$269.9 million, effectively lowering Mexico's outstanding commitments to the Federal Reserve and Treasury under the swaps to \$369.5 million and \$339.9 respectively. I should also mention that during the period, the ESF has participated in multilateral facilities to provide short-term financing to Costa Rica, Guyana, Honduras and Hungary. The facilities for Costa Rica, Guyana and Honduras were designed to facilitate the repayment of arrears to the IMF in order that those nations might qualify for new loans. The loan to Hungary was part of the \$280 million bridge loan arranged by the BIS after that country's reserves fell precipitously.

Mr. Chairman, there were no operations on behalf of the Federal Reserve during this period that require a formal action by the Committee.

FOMC NOTES
JOAN E. LOVETT
JULY 2 - 3, 1990

Desk operations since the last meeting of the Committee were aimed at maintaining the existing degree of pressure on reserves. The borrowing allowance was raised further for technical reasons, keeping pace with the rise in seasonal use that occurs at this time of year. The increases totaled \$150 million, bringing the allowance to \$450 million. Federal funds were expected to remain in the area of 8 1/4 percent.

The funds rate averaged a shade below 8 1/4 percent in the early part of the period and somewhat above it in recent days as the quarter-end drew near. Actual borrowing ran well above path levels in the first two maintenance periods as adjustment borrowing rose over the long Memorial Day weekend and then surged at the close of the June 13 period when reserves were left scarce. The funds rate slipped to 7 1/8 percent as that day progressed before spiking to 43 percent near the close. Borrowing returned to anticipated levels thereafter. For the intermeeting period thus far, the funds rate is averaging 8.26 percent.

The Desk generally faced a need to add reserves over the period as currency and required reserves experienced seasonal increases. Consequently, a significant part of the

need was met through outright purchases which came to about \$5.1 billion, consisting of \$3.2 billion of bills purchased in the market on May 30 and \$1.9 billion purchased from foreign accounts over the interval. The balance of the need was met through temporary additions which were made when the funds rate was at or above expected levels so as not to inflame occasionally enthusiastic market sentiment. This was particularly the case in the June 13 period referred to earlier when weak retail sales data followed another weak employment report. Despite a large reserve need, the Desk fell behind as the money market was persistently comfortable. In these circumstances, the Desk decided to sit it out and let the need be met at the discount window.

Market sentiment about near-term prospects for interest rates waxed and waned over the period but the undertone appeared increasingly constructive. Economic data were generally supportive of the view that the economy is slowly losing momentum, and periodic rallies were triggered by the release of reports that looked particularly sluggish. At the same time, participants were unsure about the degree of slowing, both absolutely and relative to Federal Reserve expectations, and assessments by Fed officials provided no reason to think the Fed felt it must act quickly to prevent slippage. May price reports, showing increases that were perceived as moderate, were not seen as low enough to prompt a near-term easing of policy while industrial production for the

month looked surprisingly strong. Consequently, after moving down through mid-period, rates essentially backed and filled thereafter. Current and prospective supplies also weighed on the market at times. Consequently, sentiment was encouraged late in the period by President Bush's assertion that a responsible budget package would have to include "tax revenue increases". While taken positively as a means of moving the budget negotiations forward, the market's response was somewhat muted pending more concrete information.

In the Treasury market, yields on Treasury coupon issues due out to about three years were down, on balance, by about 25 basis points while yields on longer issues were down about 15 to 20 basis points. The Treasury raised a net of about \$15 billion of new cash in the coupon market as new issue sizes were brought to record levels. Treasury financing needs to fund the deficit and raise RTC working capital were a constant focus, but supplies appeared to be relatively well distributed by the period's end. Meanwhile, room under the debt ceiling is getting low, and the Treasury has asked the Congress for an increase by early August.

Tomorrow, REFCORP will be announcing the size of its new 30-year offering which has been indicated at \$4 to \$6 billion. Participants generally feel that a 30-year issue will prove more manageable so the announced maturity was a small plus for the market.

Treasury bill rates were mixed--down in the longer maturities by about 15 basis points but up about 10 basis points in the shorter end as this sector absorbed more of the new supply. The Treasury raised a net of about \$19 billion here during the period through CMB's and increases in the weekly auction sizes--to \$17.6 billion at today's auction. Rates on new 3- and 6-month bills being sold today look likely to be about 7.73 and 7.60 percent, respectively, compared with 7.67 and 7.68 percent just prior to your last meeting.

New supplies in the high-grade corporate and municipal markets were heavy as well but issues were placed with no apparent widening of spreads. The banking sector was subject to further downgrades during the interval but spreads on debt issues held in relatively well, having already widened earlier on. "High-yield" bonds continued to benefit from a general absence of new issues and spreads here actually contracted a bit. Activity remained very event specific.

Short-term private rates showed small mixed changes. The commercial paper market was already experiencing some skittishness, and the downgrade of Chrysler debt heightened credit concerns already present in the market. We continue to hear reports that buyers of commercial paper are being more selective--either refraining from less-than-prime issuers or shortening maturities. However, while there are now more A2P2 names than before, issuers have not been actively seeking funds, limiting the impact on spreads. For Chrysler itself,

whose finance company unit was downgraded to A3 on June 14 (Moody's downgraded Chrysler Financial to P3 on June 29), spreads were out about 5 to 10 basis points. Given investor reluctance, particularly with the approach of quarter-end, it turned to alternative resources to handle liquidity needs. At this juncture, outstandings are down nearly 50 percent since the initial downgrade. Most of the money market fund holdings have now run off but others have remained willing to take the paper so that, currently, about 35 percent of maturities are being rolled over, albeit for shorter maturities.

As for the outlook ahead, the majority view is for some easing by the System over the summer if the economy weakens as expected. The employment report this Friday will be closely scrutinized for gauging the timing of such a move. The general perception is that Fed moves will be gradual, as has been its practice, and that it will seek to stay "behind the easing curve". If inflation improves with the slowdown in the economy, there is scope for long rates to do better as well but most participants have difficulty envisioning the bond yield below 8 percent. Developments abroad are also seen as impinging, to some degree, on the scope for movements here. While the bias is toward lower rates, the market has been more tempered in pricing this into the current rate structure, perhaps recalling past experience.

On a final matter, the Desk recently ceased its trading relationship with Westpac Pollock Government

Securities, Inc. The firm announced its intention to disband the primary dealership after failing to find a buyer.

William E. Pollock has been a dealer for some time, going back to the early 1950's. Westpac Banking Corp. acquired the entity in late 1986. Given profitability trends in the business, Westpac has since scaled back its plans in the fixed income markets and found that the primary dealer no longer fit into its overall strategy.

Michael J. Prell
July 2, 1990

CHART SHOW PRESENTATION -- DOMESTIC ECONOMIC OUTLOOK

The first chart presents the key assumptions underlying the staff's projections. At the top of the list remains our interpretation of your current policy objective, which we take to be making progress over time toward lower inflation, in the context of sustained economic growth. We have also assumed that fiscal policy will be moderately restrictive throughout the projection period.

The third point relates to the so-called "credit crunch." This is a complex phenomenon that is difficult to describe, let alone to measure. Part of the story is changes in the regulatory environment. More generally, though, a lot of financial chickens have come home to roost, and the effects on lenders' ability to extend credit, and on their perceptions of risk, have caused a shift in credit supply conditions. Our judgment is that this shift is retarding aggregate spending, but probably to a much smaller degree than the noise level would suggest. In the abstract, a one time shift of this sort is something that would affect primarily the level of activity, not its growth rate, after a transition period. We also think it likely that the economic drag will diminish over the next year as truly creditworthy borrowers who have been displaced recently find new credit sources, and those lenders who may have over-reacted gradually begin to make calmer assessments of risks and returns.

Against this backdrop, we have built a forecast that anticipates that interest rates remain near the levels we have observed in the past few months. Owing to the continuing effects of the restructuring of the thrift industry and bank capital constraints, the monetary aggregates are expected to grow relatively slowly: M2 at a rate of roughly 3-1/2 percent this year and 4-1/2 percent next; M3 only 1 percent this year and 1-1/2 percent in 1991. We're also expecting credit growth to remain moderate, with the nonfinancial debt aggregate expanding only 7 percent this year and 6-1/2 percent in 1991. And, finally, our forecast anticipates that the foreign exchange value of the dollar will be essentially stable.

In developing our forecast, a critical initial question was how fast the economy can grow, consistent with your objective of slowing inflation. As we read the wage and price data in the top panel of chart 2, the trend of inflation is no better than flat, and it may be creeping upward. We continue to believe that, to bend these curves downward decisively, some increase in resource slack will be needed, and so we have assumed that aggregate demand will be restrained enough to bring about a rise in the unemployment rate.

The issue addressed in the lower panels of the chart is whether it might take even slower real growth than we've projected to produce the rise in unemployment in the forecast. After all, the jobless rate has been essentially flat for some time now, with GNP growth no more rapid than we are projecting for the next six quarters. In this context, one might reasonably ask whether labor force or productivity trends have deteriorated, pulling down the rate of potential GNP growth.

The short answer is that we don't think so. As indicated in the middle left panel, the growth of the working age population has been slowing gradually, and labor force growth has slowed even more noticeably of late. Reflecting these movements, the ratio of the two variables, the participation rate, has flattened out perceptibly in the past year. This is shown in the right-hand panel. Our assessment is that the flattening is mainly attributable to the slackening of labor demand, which has caused fewer persons to seek employment. To the extent that there is some residual surprise, we think it will prove to have been statistical noise, and we expect labor force participation to rise slowly in coming quarters.

The other important ingredient in potential output growth is productivity, and the lower panel is intended to indicate that the recent deterioration in output per hour is consistent with a simple model in which employers adjust their labor inputs with a lag to changes in output. As we see it, then, we don't have grounds yet for concluding that we've entered a period in which the underlying trend of productivity growth has shifted down from the 1-1/3 percent per year pace we observed in the 1980s. All this suggests that GNP growth of less than 2-1/2 percent or so is likely to be accompanied by gradually rising unemployment.

Which leads me to the next chart, where you will find a summary of the economic forecasts you've submitted, along with those of the staff and the Administration. As you can see, almost all of you have placed real GNP growth this year in a 1-1/2 to 2 percent range, encompassing the staff's 1.6 percent projection, but falling a little

short of the Administration's most recent economic assumptions. Most of you, like the staff, expect that inflation, as measured by the CPI, will be somewhere in the range of 4-1/2 to 5 percent over the four quarters of this year. Looking to 1991, the central tendency of your forecasts of real GNP is 2 to 2-1/2 percent growth, but you generally expect inflation to slow to 3-3/4 to 4-1/2 percent; the staff is projecting 2-1/4 percent growth with 4-1/2 percent inflation. The Administration, with an assumption that potential GNP growth is around 3 percent per annum, is projecting a stronger expansion of activity, while inflation moves down to 4-1/4 percent.

With that general overview, let me turn now to the sectoral specifics of the staff's forecast, starting with the consumption outlook in chart 4. As the upper left panel shows, spending on services has remained robust, but there has been a decided plunge in purchases of goods. Frankly, we find it hard to believe that the demand for goods has contracted as sharply as the May retail sales data indicate, and we are expecting some combination of revisions and bounceback in the near term. But we have carried through a portion of the recent weakness in our forecast, and we've cut second-half growth of real PCE, shown at the right, to less than 2 percent. Consumer spending accelerates only mildly during 1991 and falls short of growth in GNP, in part because, given our price and tax projections, real disposable income grows relatively slowly.

The reason we haven't translated the recent spending data into a more pessimistic forecast is that we can't find in other data an explanation for so sudden and so marked a retrenchment. It is true that

indexes of consumer sentiment have declined of late. In the Michigan survey, shown in the middle left panel, that decline has occurred in the "expected" components, and it reflects less optimistic views about the outlook for business conditions--a not very surprising finding, given all of the negative news that households have been hearing. But the indexes still are far above recession levels. At the right, I've noted how geographically concentrated the deterioration in consumer sentiment has been, with the Northeast having experienced a major swing in the past two years.

Another reason for skepticism about indications of a big slump in consumer spending is the high level of aggregate household assets relative to income, charted in the bottom panel. This ratio is at an historically high level, exceeded in any appreciable way only briefly in 1987, before the stock market crash. If you deduct indebtedness and look at net worth, you get the same picture. This, we think, provides some support for our expectation that there will be a reversal of the recent run-up in the personal saving rate in coming months.

The chart does highlight one of the potential wild cards in the present situation, however, namely home prices and the perception thereof. Houses represent a significant share of personal wealth, and there is a considerable subjectivity in owners' views of their values. All of the talk of falling home prices in the media could make people feel less secure, even if their local markets are doing OK.

And there is no doubt that market conditions do vary widely by locale. The top panel of chart 5 is illustrative. You can see that, while the median prices of existing homes sold continued to rise in the

Midwest and South over the past year, they fell slightly in the Northeast and the West, where many local markets had boomed earlier. Apart from what this may have done to consumption through wealth or confidence effects, these movements in prices probably have weakened the investment motive for home buying. As indicated in the middle left panel, real mortgage rates look very high, even if one proxies price expectations by recent national median sales results, let alone the worst cases in the top chart. Moreover, for people who are willing to buy at present, in some locales the softness of the market raises concerns about the ability to sell their current homes at acceptable prices.

The panel at the right is intended to underscore the point that the contraction of the thrift industry probably has not contributed much, in a direct way, to the recent slump in home sales. As you can see, the spread between rates on fixed rate mortgages and those on Treasuries actually has narrowed since FIRREA was enacted last summer.

If the S&L contraction has had a significant effect on building activity this year, it probably has been through the tightening of construction credit. We expect that those builders with plans for economically viable projects will be able in time to find financing, and this is one reason why, as indicated in the bottom panel, we expect there to be some pickup in housing starts next year.

Prospects for a recovery in nonresidential construction look less favorable. As indicated in the top panel of chart 6, we think business investment in structures, after a first-quarter spurt, probably turned down in the second quarter and will decline through next year.

We're projecting moderate growth in the larger equipment component of BFI, however, and thus, as the right-hand table indicates, we have slow growth in total capital spending.

For the near term, the orders data for domestic manufacturers of business equipment look consistent with our forecast. The trend in orders (excluding aircraft) plotted in the middle left panel is far from impressive, but computers have been a relatively strong component of late, and their declining deflator magnifies the real gains. As for structures, at the right, contracts for office buildings have declined almost a quarter since 1988, and other segments have begun to weaken as well. We expect these trends to be extended in the months ahead.

Apart from the effects of slower output growth and declining capacity utilization, the outlook for business spending is clouded by a negative corporate financial position. Profit margins and internal cash flows are projected to remain under pressure, as shown in the bottom panel. These trends are reflected in the deterioration of corporate credit quality. The bond rating changes plotted in the top left panel of chart 7 document this deterioration, and the projected movement in interest payments relative to cash flow, at the right, suggest that the picture is unlikely to improve soon.

Such strains provide further encouragement to businesses not to tie up capital in inventories. Thus, although the aggregate inventory-sales ratios plotted through April in the middle panel don't suggest any appreciable overhangs, we are expecting businesses to keep a tight rein on stocks. Indeed, the projected low rate in non-auto inventory

accumulation indicated in the lower chart for the second half of this year implies a slight further decline in stocks relative to final sales.

Turning now from the private to the public sector, in chart 8, budgetary problems likely will be restraining growth in overall government purchases through 1991, and probably beyond. In the state and local sector, there was a big surge in construction spending in the first quarter, likely reflecting a combination of disaster recovery and good weather. But we expect growth in construction to be down for this year as a whole and again in 1991, along with growth in other spending. We recognize that there is strong demand for infrastructure investment and for a variety of state and local services, but budgets are significantly out of kilter, as suggested by the deficit figures at the right. Even to achieve the reduction in the budget gap we've forecast for 1991, spending curtailments will have to be coupled with tax increases.

In the federal sector, the middle panels, real defense spending is headed down, and should outweigh growth in domestic programs.

Embedded in this forecast of federal purchases is, of course, our assumption about the deficit-reduction effort for fiscal 1991. As the bottom left table indicates, we are projecting a \$157 billion deficit in the current year, excluding RTC spending, falling to \$116 billion next year. The reduction in the deficit projected for FY91 hinges on the \$35 billion package of tax and spending actions outlined at the right.

That package is \$5 billion more than in our prior forecasts, and it is considerably larger than any enacted in the deficit-reduction

efforts of recent years. And our package contains none of the smoke and mirrors devices that played significant roles in those earlier attempts. That said, in light of the President's statement last Tuesday, the odds of still more substantial action look higher than they did before.

We already had been planning to explore the implications of tighter fiscal policy in this briefing, but under the new circumstances, this may be of greater interest than we had anticipated. Your next chart presents the results of some model simulations, based on deficit reduction packages of \$70 billion in FY91 and '92, twice the size of those in the Greenbook forecast. The added reduction in '91 includes a 15 cent per gallon hike in the gasoline tax and \$19 billion in expenditure cuts. The extra 1992 package includes \$16 billion in personal income tax increases, plus a variety of outlay cuts.

The first box shows what these budgetary actions would do to the economy if interest rates were held to a baseline path. As you can see, the model predicts sizable output losses. If you take the Greenbook forecast as the baseline--and extend it into 1992 as in the simulations reported in the Bluebook--the implication is that holding interest rates at recent levels would eliminate almost all of the growth projected for 1991 and 1992. The unemployment rate would reach 7 percent next year and approach 8 percent in 1992, with the result that inflation would be around 3 percent in 1992 and moving lower at a good clip.

The bottom box examines the question of what would happen if monetary policy were adjusted to offset the output effects of the sharper fiscal contraction. It is here that we introduce the notion of

"credibility." In our econometric model, long-term interest rates adjust over time to movements in short-term rates. Although we tend to think of bond yields as being determined in a forward-looking process, this model actually has proven quite serviceable over the years. Nonetheless, we ought to consider the possibility that a budget agreement that offers real assurance that the deficit finally will be eliminated would be a surprise to a skeptical bond market and that investors' anticipations of reduced future federal credit demands would accelerate the adjustment of bond yields relative to what the model indicates. The two alternative views of expectations formation are represented by the results labeled "without 'credibility'" and "with 'credibility'."

In the without-credibility case--that is, the straight model run--short-term rates initially must fall sharply below the baseline path, to pull down long rates enough to stimulate activity, which in the model is more responsive to long rates than to short rates. The short rates then can move back toward the baseline, while the lagged effects on long rates carry over for a while, growing from 30 basis points in the fourth quarter of this year to 80 basis points in 1992. Relative to the Greenbook path, the federal funds rate would have to go down to just over 6 percent on average in the fourth quarter of this year.

As for the with-credibility case, the model doesn't provide much guidance as to what sort of bond market reaction it would be reasonable to expect. We've somewhat arbitrarily assumed that the bulk of the longer-range adjustment in bond rates would occur almost immediately, producing a 65 basis point decline relative to baseline in

the fourth quarter. In this case, the federal funds rate would have to decline only 90 basis points in the fourth quarter relative to the baseline.

One other result of these simulations is noted in the bottom rows of the table. The assumption of a gas tax increase, coupled with the depreciation of the dollar that is likely to accompany the decline in interest rates, implies a somewhat higher inflation rate if output is held to the baseline path. Such inflationary effects could be minimized if workers don't attempt to recoup the loss of purchasing power through higher wages, but in our model they do, setting off further price increases, and so on.

These exercises obviously should be taken with at least a grain of salt. Among other things, the interest rate profiles could be varied considerably by making different assumptions about the timing of the monetary policy adjustment. But I think the simulations do provide some indications of orders of magnitude and they do highlight some of the considerations that would come into play if there were a major budget accord. In assessing what is appropriate for the Fed to do, one would need to think about the underlying trends in the economy, the size and the composition of the budget package, and the likely response of the financial markets. That response involves not only the market's view of the fiscal outlook, but also its view of what the Fed's reaction implies about our longer-run objectives. In short, there is no simple prescription that can be supplied in advance.

Ted will now continue our presentation.

E. M. Truman
July 2, 1990

Chart Show Presentation -- International Developments

On the international side, our basic outlook is for more of the same: the foreign exchange value of the dollar is projected to be stable, and growth abroad should sustain moderate progress toward external adjustment while also helping to support domestic output. Therefore, in considering prospective international developments in the current economic context, the principal issue is whether unforeseen external developments are likely to pose significant risks to the basic staff forecast -- risks that might disrupt the smooth pattern of internal adjustment that Mike has laid out. My sense is that such risks are somewhat smaller than they have been on balance over most of the past decade, but they are not negligible. The dollar has been weak recently and could well decline substantially; alternatively, the dollar may appreciate. Growth and inflation in Western Europe could be more rapid than expected, and this would spill over into the U.S. economy; however, there is some down-side risk in this area as well. Oil prices could rise, or fall, sharply because of political or economic developments in the Middle East.

The first international chart, in the upper left panel, provides a perspective on the dollar's movements on average over the past five and a half years. Essentially the dollar, in nominal or price adjusted terms, is trading in the lower half of

the range that has prevailed since the Louvre Accord in February 1987. However, the dollar in nominal terms is down 11 percent from its peaks of a year ago, and is about 4 percent lower than it was last December.

As can be seen from the data in the box at the right, the dollar has depreciated in nominal terms over the past six months against sterling and the Deutschemark, while remaining unchanged against the Canadian dollar and appreciating against the yen. It has also appreciated against the currencies of South Korea and Taiwan.

In our forecast, the dollar on average is essentially unchanged in both real and nominal terms against the currencies of the other G-10 countries. We also expect that the dollar will appreciate somewhat further this year in real terms against the currencies of our major trading partners among the developing countries, and retrace part of that appreciation in 1991.

As is shown in the lower panel, we estimate that U.S. real long-term interest rates have risen together with the average of foreign rates by almost 75 basis points on balance this year. As is shown in the box at the right, the rise in nominal long-term rates in the United States has been about the same as the estimated rise in real rates, but nominal rates have risen about 150 basis points in Germany and somewhat more in Japan, suggesting a relative rise in expected inflation in those two countries. So far this year, the rise in nominal short-term interest rates has been about 70 basis points in Japan, and negligible in Germany and the United States.

In our forecast, we have incorporated a policy-induced rise in nominal short-term interest rates in Germany on the order of 100 basis points by the end of 1991, about in line with the expected pick-up in German inflation over the next 18 months; in other words, we have assumed that the Bundesbank will follow a moderately accommodative policy. In Japan, we assume that short-term rates will remain at their recently achieved higher levels through the end of the year before edging off in 1991 as Japan's inflation abates somewhat.

The upper left panel of the next chart illustrates the slowing in the growth of industrial production on average in the six major foreign industrial countries over the past two years. Although industrial production has been expanding less rapidly in all of these countries, the deceleration has been most pronounced in the United Kingdom and Canada -- Canada has had an actual year-over-year decline. As you know, these two countries have been trying to bring down their high inflation rates for some time now. To date, Canada has been more successful than the United Kingdom, and it contributes along with France and Italy to the mild downtrend in the average rate of consumer price inflation shown in the panel at the right.

The middle panel shows the rise until recently in commodity prices (excluding oil) measured in dollars and foreign currencies. Trends in the prices of these commodities incorporate a number of supply and demand influences, but on balance they suggest relatively high levels of capacity utilization and associated inflation pressures.

As stated in the box at the bottom, although inflation has slowed somewhat, policymakers abroad remain concerned about underlying wage and capacity pressures. Monetary policies are expected to be cautious with, perhaps, a decline in interest rates in some countries next year as inflation eases. Meanwhile, we anticipate that fiscal policies will be essentially neutral in most countries, with the important exception of Germany where we anticipate a substantial further expansion. Indeed, my impression is that the direct and indirect economic and financial costs of German economic and monetary union are universally viewed outside of Germany as being higher than the Germans are saying they will be. As I noted earlier, one of the potential risks to our forecast is significantly higher inflation in Germany and Europe as a whole.

Turning to our forecast, the upper left panel of Chart 12 shows that consumer price inflation in the major foreign industrial countries has moved up close to the U.S. rate and is projected to stay in that range throughout the forecast period. As can be seen in the box at the right, both Germany and Japan contributed to the pick-up in inflation abroad last year and are expected to do so again this year. However, we are projecting some deceleration of inflation in Japan next year as the effects of a tighter monetary policy take hold, while inflation moves up another 1/2 point in Germany.

On the real side -- the middle left panel -- growth on average in the major foreign industrial countries should slow somewhat in the second half of 1990 from the rapid pace in the

first half that appears to have been boosted by special factors. However, growth in these countries will continue to be faster than in the United States. The pick-up abroad in 1991 is largely attributable to more rapid growth in Germany and recovery in Canada and the United Kingdom.

The box at the right compares our current outlook for all the other G-10 countries as a group with our outlook in January. You will note that growth abroad is now projected to be about 1/3 percent higher both this year and next, while our outlook for inflation has moved up by one-half to three-quarters of a percentage point in both years. Developments in Germany were a major, but not the only, factor contributing to the changes in our forecast; underlying inflation rates also have been higher than we estimated five months ago.

The bottom panel provides a perspective on growth for all of our trading partners. Growth in the developing countries has pulled down the average over the past two years. While we expect to see little change this year, we are looking for a modest acceleration in 1991 based, in part, on a recovery of growth in Latin America.

Against this background, the next chart presents our outlook for exports. The quantity and dollar value of our agricultural exports, shown in the top left panel, surged in the first quarter because of a bunching of wheat shipments to the USSR. After a lull in the second and third quarters, we expect to see a further moderate expansion in agricultural exports late this year and in 1991.

The middle left panel shows the up-tick in computer exports that also occurred in the first quarter. After a pause in the second quarter, strong growth should resume and contribute, as is shown in the box at the right, to a sustained increase in such exports in 1982 dollars, but to only a modest increase in their value after adjustment for the continuing decline in prices.

Other non-agricultural exports, the bottom panels, are projected to continue to expand rapidly over the forecast period. In the first quarter, these exports were boosted by the catch-up in aircraft shipments, but exports of capital goods, automotive products to destinations other than Canada, and consumer goods were also strong. As can be seen in the box at the right, we are expecting growth in the quantity of these exports to be sustained at nearly a double-digit rate, helped along by the economic expansion abroad and moderate price increases for our exports. According to the BLS series, the average price of all non-agricultural exports increased only 6/10ths of a percent over the 12 months through May.

On the import side, the next chart, the average price of non-oil imports showed no increase over the four quarters to the first quarter of this year -- the left box at the top. This moderation in prices contributed to the acceleration in quantities shown in the box at the right. However, the growth in total non-oil imports was more than accounted for by computers, which are not particularly price sensitive, line 3, and capital goods, line 4.

As is shown in the middle panels, imports of computers are projected to continue to expand rapidly this year and next, though not at quite so rapid a pace as was recorded in 1989. Meanwhile, the quantity of other non-oil imports, shown in the lower panels, is expected to show little or no expansion for the second year in a row, under the influence of the dollar's decline over the past year, only moderate economic growth, and a continuing decline in imports of automotive products. In 1991, we expect a moderate increase as the pace of U.S. economic activity quickens and the effects of the dollar's decline wear off.

Imports of petroleum and products, Chart 15, in recent quarters again have been affected by gyrations in prices and quantities. As is shown in the top panel, the spot price of West Texas Intermediate has been on a downward trend since its peak in January, and the average U.S. import price has followed right along, with a slight lag. The main influences on prices, shown in the middle panels, have been the rise of OPEC production of crude petroleum and natural gas liquids to a new higher plateau of about 25 million barrels a day and the effects on demand of relatively warm winter weather, both here and abroad, which together contributed to a surge in petroleum stocks on land in the OECD countries in the first quarter.

We expect that this overhang will be eliminated over the next two quarters and that oil prices will resume a gradual upward trend in the fourth quarter of this year, reaching \$18.25 per barrel by the fourth quarter of next year, as is shown in the

box at the lower left. Our near-term outlook, for the balance of 1990, is broadly in line with market expectations. For 1991, our assumption is motivated by our longer-term assessment that tightening supply-demand conditions will place oil prices under moderate upward pressure in real terms in the 1990s.

The right panel shows our forecast for the quantity and value of oil imports. After the bulge in the first quarter, the quantity of our oil imports should begin to rise again later this year under the influence of declining domestic production and rising demand. We are projecting imports at the rate of 9 million barrels a day by the second half of next year, and the value of those imports will be around \$60 billion at an annual rate.

The last chart provides an overview of our outlook for the U.S. external accounts. As is shown in the top panel, in the mid-1980s exports of both goods and services and goods alone -- the grey and black bars -- expanded more rapidly in real terms than overall GNP (the open bar), providing an impetus to domestic production. However, with the strong dollar, imports surged -- the pink and red bars. After the dollar's decline began to take hold, exports expanded even more rapidly from 1987 to 1989, and the rate of increase of imports slowed markedly. This year, exports will continue to contribute substantially to overall demand for U.S. production, while slower U.S. demand and the dollar's depreciation over the past year hold down the growth of imports. Next year, exports should strengthen further because of the lagged effects of the lower dollar this year and stronger

foreign growth, but as domestic demand increases, imports will also rise more rapidly.

These trends translate into a continued net positive contribution to the growth of GNP from net exports of goods and services (the red line in the lower panel) and a moderate further narrowing in our current account deficit to slightly more than \$80 billion late this year and less than \$80 billion in 1991 -- about 1-1/4 percent of GNP. These current account deficits projected for both this year and next would be the lowest since 1984.

Mr. Chairman, that concludes our presentation.